WHAT IS CLAIMED IS:

1. A liquid composition for use in compression refrigeration, air-conditioning and heat pump systems comprising:

(A) a fluoroalkene containing from 3 to 4 carbon atoms and at least 1 but no more than 2 double bonds; and

(B) an effective amount to provide lubrication of an essentially miscible organic lubricant comprised of carbon, hydrogen and oxygen and having a ratio of oxygen to carbon effective to provide a degree of miscibility with said fluoroalkene so that when up to five weight percent of lubricant is added to said fluoroalkene the mixture has one liquid phase at at least one temperature between –40 and +70°C.

2. The composition of claim 1, wherein the mixture has one liquid phase when up to five weight percent of lubricant is added to said fluoroalkene.

3. The composition of claim 2, wherein the mixture has one liquid phase when up to 20 weight percent of lubricant is added to said fluoroalkene.

4. The composition of claim 3, wherein the mixture has one liquid phase in all proportions of fluoroalkene and lubricant.

5. The composition of claim 1, wherein the mixture has one liquid phase over essentially the entire temperature range.

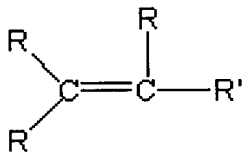
6. The composition of claim 1, wherein said lubricant is selected from the group consisting of polyalkylene glycol, polyalkylene glycol ester and polyol ester lubricants for compressor refrigeration, air-conditioning and heat pump systems.

7. The composition of claim 1, wherein said fluoroalkene has the structure:

XCF_ZR_{3-Z}

wherein X is a C_2 or a C_3 unsaturated, substituted or unsubstituted alkyl radical, R is independently selected from the group consisting of Cl, Br, I or H, and z is 1 to 3.

8. The composition of claim 7, wherein said fluoroalkene has the structure:



wherein each R is independently Cl, F, Br, I or H; R' is $(CR_2)_nY$; Y is CRF_2; and n is 0 or 1.

9. The composition of claim 8, wherein said fluoroalkene is 1,3,3,3-tetrafluoropropene or 3,3,3-trifluoropropene.

10. The composition of claim 1, wherein said organic lubricant is a polyalkylene glycol.

11. The composition of claim 10, wherein said polyalkylene glycol has at least one terminal hydroxyl group.

12. The composition of claim 11, wherein both terminal groups of said polyalkylene glycol are hydroxyl groups.

13. The composition of claim 10, wherein said polyalkylene glycol has at least one alkyl terminal group.

14. The composition of claim 13, wherein at least one terminal alkyl group of said polyalkylene glycol contains at least one heteroatom.

15. The composition of claim 14, wherein said polyalkylene glycol has at least one fluoroalkyl terminal group.

16. The composition of claim 1, wherein said organic lubricant is a polyalkylene glycol ester.

17. The composition of claim 1, further comprising an amount of hydrocarbon lubricant essentially miscible with said fluoroalkene and said organic lubricant.

18. The composition of claim 17, further comprising a surfactant for solubilizing said hydrocarbon lubricant with said organic lubricant, in an amount effective to form an essentially miscible blend.

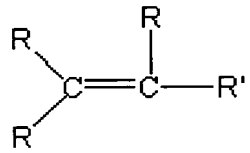
19. A method for producing refrigeration which comprises condensing a refrigerant composition comprising a fluoroalkene containing from 3 to 4 carbon atoms and at least 1 but no more than 2 double bonds, and thereafter evaporating said refrigerant composition in the vicinity of a body to be cooled.

20. The method of claim 19, wherein said fluoroalkene has the structure:

$$XCF_ZR_{3-Z}$$

wherein X is a C_2 or a C_3 unsaturated, substituted or unsubstituted alkyl radical, R is independently selected from the group consisting of Cl, Br, I or H, and z is 1 to 3.

21. The method of claim 20, wherein said fluoroalkene has the structure:



wherein each R is independently Cl, F, Br, I or H; R' is $(CR_2)_nY$; Y is CRF_2; and n is 0 or 1.

22. The method of claim 21, wherein said fluoroalkene is 1,3,3,3-tetrafluoropropene or 3,3,3-trifluoropropene.

23. The method of claim 19, wherein said refrigeration method is performed in a compression refrigeration system.

24. The method of claim 19, wherein said refrigeration method is performed in an air-conditioning system.

25. The method of claim 19, wherein an organic lubricant is added to said refrigerant in an amount effective to provide lubrication comprised of carbon, hydrogen and oxygen and having a ratio of oxygen to carbon effective to provide a degree of miscibility with said fluoroalkene so that when up to five weight percent of lubricant is added to said fluoroalkene the refrigerant has one liquid phase at at least one temperature between –40 and +70°C.

26. The method of claim 25, wherein the refrigerant has one liquid phase when up to 20 weight percent of lubricant is added to said fluoroalkene.

27. The method of claim 26, wherein the refrigerant has one liquid phase in all proportions of fluoroalkene and lubricant.

28. The method of claim 25, wherein the refrigerant has one liquid phase over essentially the entire temperature range.

29. The method of claim 25, wherein said lubricant is selected from the group consisting of polyalkylene glycol, polyalkylene glycol ester and polyol ester lubricants for compressor refrigeration and air-conditioning systems.

30. The method of claim 25, wherein there is further added to said refrigerant an amount of a hydrocarbon lubricant essentially miscible with said fluoroalkene and said organic lubricant.

31. The method of claim 30, wherein there is further added to said refrigerant a surfactant for solubilizing said hydrocarbon lubricant with said fluoroalkene and said organic lubricant in an amount effective to form an essentially miscible blend.

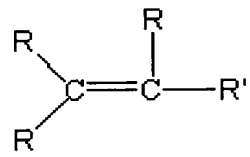
32. A method for producing heating which comprises condensing a fluoroalkene composition containing from 3 to 4 carbon atoms and at least 1 but no more than 2 double bonds in the vicinity of a body to be heated and thereafter evaporating said fluoroalkene composition.

33. The method of claim 32, wherein said fluoroalkene has the structure:

$$XCF_ZR_{3-Z}$$

wherein X is a C_2 or a C_3 unsaturated, substituted or unsubstituted alkyl radical, R is independently selected from the group consisting of Cl, Br, I or H, and z is 1 to 3.

34. The method of claim 33, wherein said fluoroalkene has the structure:



wherein each R is independently Cl, F, Br, I or H; R' is $(CR_2)_nY$; Y is CRF_2; and n is 0 or 1.

35. The method of claim 34, wherein said fluoroalkene is 1,3,3,3-tetrafluoropropene or 3,3,3-trifluoropropene.

36. The method of claim 32, wherein an organic lubricant is added to said fluoroalkene composition in an amount effective to provide lubrication comprised of carbon, hydrogen and oxygen and having a ratio of oxygen to carbon effective to provide a degree of miscibility with said fluoroalkene composition so that when up to five weight percent of lubricant is added to said fluoroalkene composition, said composition has one liquid phase at at least one temperature between – 40 and +70°C.

37. The method of claim 36, wherein the fluoroalkene composition has one liquid phase when up to 20 weight percent of lubricant is added thereto.

38. The method of claim 37, wherein the fluoroalkene composition has one liquid phase in all proportions of fluoroalkene composition and lubricant.

39. The method of claim 36, wherein the fluoroalkene composition has one liquid phase over essentially the entire temperature range.

40. The method of claim 36, wherein said lubricant is selected from the group consisting of polyalkylene glycol, polyalkylene glycol ester and polyol ester lubricants for compressor refrigeration and air-conditioning systems.

41. The method of claim 36, wherein there is further added to said fluoroalkene composition an amount of a hydrocarbon lubricant essentially miscible with said fluoroalkene and said organic lubricant.

42. The method of claim 41, wherein there is further added to said fluoroalkene composition a surfactant for solubilizing said hydrocarbon lubricant with said fluoroalkene and said organic lubricant in an amount effective to form an essentially miscible blend.